



# MSMR

## Medical Surveillance Monthly Report

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*Data in the MSMR is provisional, based on reports and other sources of data available to the Medical Surveillance Activity. Notifiable conditions are reported by date of onset (or date of notification when date of onset is absent). Only cases submitted as confirmed are included.*

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### Editorial Comment

This issue marks the beginning of the MSMR's third year of reporting Army-wide medical surveillance information. Each April, the MSMR summarizes hospitalization and reportable disease experiences during the previous calendar year. In this anniversary issue, the MSMR introduces new disease and injury summaries that will be useful for tracking effects of Army disease and injury prevention and control programs.

The Army requires central reporting of 97 diseases/conditions with public health or military operational significance (e.g., cases with command interest or requiring a public health response). The Army Medical Surveillance Activity has designated 23 of these as sentinel reportable diseases (SRDs). The SRDs were selected because they represent various modes of transmission and are reported with relatively high frequencies Army-wide -- thus, time trend analyses are meaningful. Presentations of SRD incidence data are grouped by principal modes of transmission, including fecal-oral, respiratory, sexual, arthropod, or by the main affected organ (e.g. liver, meninges). For all SRDs, comparisons of reports to date (current versus prior year) will be presented in the MSMR quarterly (see pages 19-21). Two-year time trends and

tabular summaries of selected sexually transmitted diseases and seven of the most frequently reported SRDs will be published monthly (see pages 4-7).

Clearly, frequencies and trends of reportable diseases are less meaningful when reporting is incomplete, inaccurate, or untimely. As an objective measure of reporting compliance, the AMSA analyzed the proportion of all "reportable" hospitalizations (as recorded in IPDS, the Army's central hospitalization database) that were reported through the MSS, the Army's automated disease reporting system. To track indicators of compliance with Army required disease reporting, semiannually the MSMR will publish rates and trends of reporting completeness. Separately, the AMSA will provide individual preventive medicine activities with installation-specific compliance estimates. The intent is to provide preventive medicine activities with data useful for developing more comprehensive surveillance programs.

As always, the MSMR staff appreciates the consistent efforts of its contributors and the encouraging support of its readers. The MSMR can be useful, interesting, and informative only to the extent that those efforts and that support continue.

*John F. Brundage, MD, MPH*  
Executive Editor

*MAJ(P) Mark V. Rubertone, MD, MPH*  
Editor

*Kimmie Kohlhasse, MS*  
Managing Editor

*Prepared by the Medical Surveillance Activity, Directorate of Epidemiology and Disease Surveillance, United States Army Center for Health Promotion and Preventive Medicine. Inquiries regarding content or material to be considered for publication should be directed to the editor, Army Medical Surveillance Activity, Bldg. T-20, Rm 213, Washington DC, 20307-5100.*

*E-mail: "maj\_mark\_rubertone@wrsmtg-ccmail.army.mil"*

*Publishing office is the Executive Communications Division, U.S. Army Center for Health Promotion and Preventive Medicine, Aberdeen Proving Ground, Maryland 21010-5422.*

*To be added to the mailing list, contact the Army Medical Surveillance Activity @ DSN 662-0471, Comm: (202) 782-0471.*

*Views and opinions expressed are not necessarily those of the Department of the Army.*

*Surveillance Trends***Hospitalizations and Noneffective Days, Active Duty Soldiers, 1996**

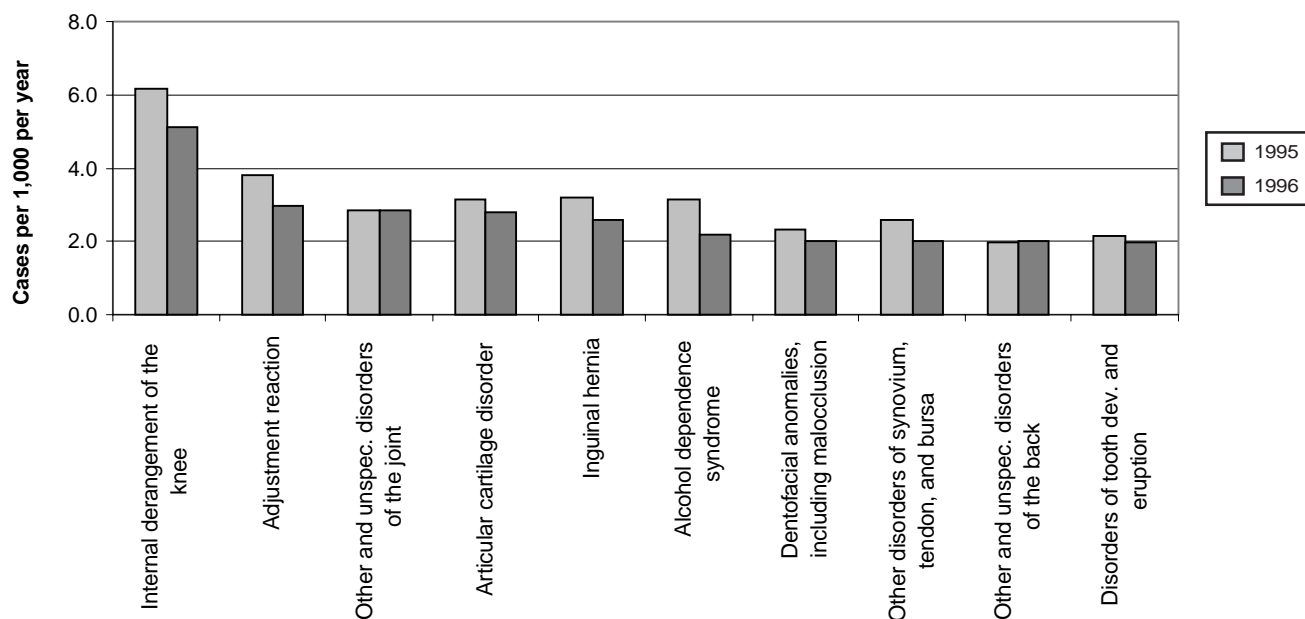
During 1996, the overall hospitalization rate among active duty soldiers was 111.1 per 1000 per year. Therefore, on the average, one of every 9 soldiers was admitted to a military hospital during the year. Each hospitalization of a soldier (on the average) accounted for 5.2 hospital sick ("noneffective") days. Musculoskeletal and psychological/psychiatric disorders accounted for disproportionate numbers of hospitalizations and noneffective days. Conditions of muscles, bones, joints and connective tissue accounted for almost a fourth (23.7%) of all hospitalizations while mental disorders accounted for more than a fifth (21.9%) of all hospital sick days. The figure below shows the ten leading causes of hospitalizations among active duty soldiers during 1996 compared to 1995. In both years, hospitalizations were most frequent for "internal derangements of the knee" which include cartilage tears, chondromalacia patellae, and old

injuries of collateral and cruciate ligaments.

*Trends (1996 versus 1995):* The Army-wide annual hospitalization rate declined by approximately 18% between 1995 (135.2 per 1000) and 1996 (111.1 per 1000). Over the period, hospitalization rates declined among both males and females and in every disease-defined category. Among the top ten specific causes of hospitalizations (figure 1), rates were significantly lower for eight and were relatively unchanged for the other two: nonspecific disorders of joints (e.g., effusions, hemarthroses, pain or stiffness not otherwise classified) and the back (e.g., radiculitis, backache not otherwise specified). Teenaged male soldiers were the only demographically defined subgroup with a higher (+10.8%) annual hospitalization rate in 1996 (110.8 per 1000) than in 1995 (100.0 per 1000). Declines in non-effective rates were even more remarkable. In 1996, 579

*Continued on page 12*

**Figure 1. Ten leading causes\* of hospitalizations among active duty soldiers, 1996 (compared to 1995)**



\* Based on 3-digit categories, ICD-9

**TABLE I. Selected sentinel reportable diseases, US Army Medical Treatment Facilities\*  
March, 1997**

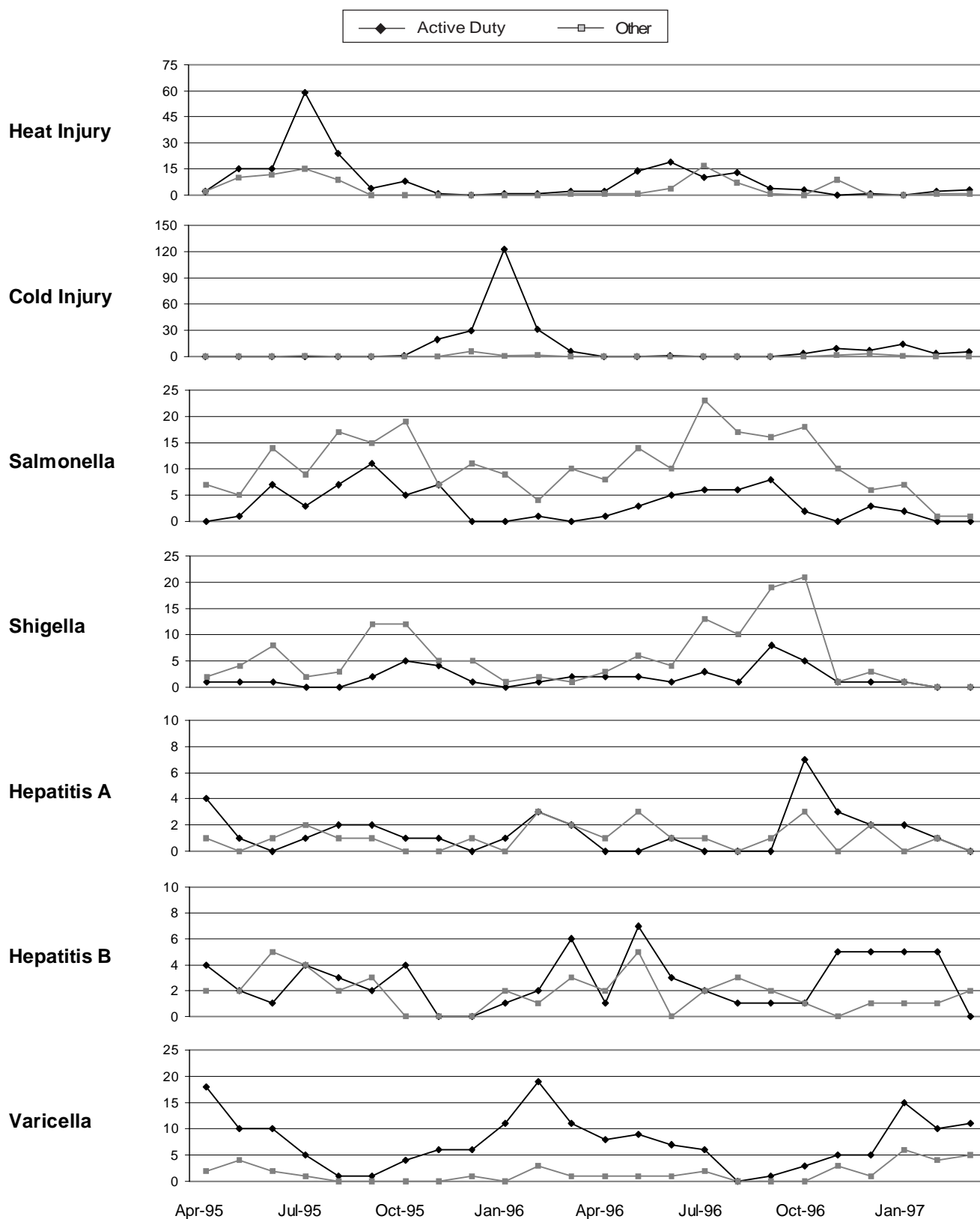
Reporting MTF/Post**	Total number of reports submitted March 1997	Environmental Injuries		Viral Hepatitis		Salmonellosis		Shigella		Varicella	
		Active Duty				Active Duty	Other	Active Duty	Other	Active Duty	Other Adult
		Heat	Cold	A	B						
		Cum. 1997	Cum. 1997	Cum. 1997	Cum. 1997	Cum. 1997	Cum. 1997	Cum. 1997	Cum. 1997	Cum. 1997	Cum. 1997
NORTH ATLANTIC RMC											
Walter Reed AMC	31	-	-	-	-	-	-	-	-	1	1
Aberdeen Prov. Ground	-	-	-	-	-	-	-	-	-	-	-
FT Belvoir, VA	-	-	-	-	-	-	-	-	-	-	-
FT Bragg, NC	-	-	3	-	-	1	4	-	1	-	-
FT Drum, NY	6	-	1	-	-	-	-	-	-	2	-
FT Eustis, VA	18	-	-	-	-	-	1	-	-	-	-
FT Knox, KY	25	-	-	-	-	-	-	-	-	-	-
FT Lee, VA	1	-	-	-	-	-	-	-	-	-	-
FT Meade, MD	8	-	-	-	-	-	1	-	-	-	-
USMA, West Point, NY	-	-	-	-	-	-	-	-	-	-	-
CENTRAL RMC											
Fitzsimons AMC	-	-	-	-	-	-	-	-	-	-	-
GREAT PLAINS RMC											
Brooke AMC	-	-	-	-	-	-	-	-	-	-	-
FT Carson, CO	41	-	-	1	-	-	-	-	-	-	-
FT Hood, TX	53	-	-	1	1	-	1	-	-	1	-
FT Leavenworth, KS	7	-	-	-	-	-	-	-	-	-	-
FT Leonard Wood, MO	10	-	2	-	-	-	-	-	-	12	4
FT Polk, LA	3	-	1	-	-	-	-	-	-	-	-
FT Riley, KS	2	-	-	-	-	-	-	-	-	-	-
FT Sill, OK	-	-	2	1	-	-	-	-	-	-	-
Panama	-	-	-	-	-	-	-	-	-	-	-
SOUTHEAST RMC											
Eisenhower AMC	31	-	-	-	1	-	-	-	-	-	-
FT Benning, GA	-	3	-	-	-	-	-	-	-	5	-
FT Campbell, KY	59	-	13	-	-	-	-	-	-	3	1
FT Jackson, SC	-	-	-	-	-	-	-	-	-	-	-
FT McClellan, AL	-	-	-	-	-	-	-	-	-	-	-
FT Rucker, AL	-	-	-	-	-	-	-	-	-	-	-
FT Stewart, GA	60	-	-	-	-	-	-	-	-	1	-
SOUTHWEST RMC											
Wm Beaumont AMC	41	-	-	-	-	-	-	-	-	3	1
FT Huachuca, AZ	47	-	-	-	-	-	-	-	-	-	-
FT Irwin, CA	6	-	-	-	-	-	-	-	-	-	-
NORTHWEST RMC											
Madigan AMC	30	-	-	1	-	-	-	-	-	-	-
FT Wainwright, AK	-	-	-	-	-	-	-	-	-	-	-
PACIFIC RMC											
Tripler AMC	25	-	-	-	-	-	-	-	-	-	-
OTHER LOCATIONS											
Europe	70	-	-	-	7	1	2	1	-	6	-
Korea	13	-	-	-	3	-	-	-	-	1	-
Total	587	3	22	4	12	2	9	1	1	35	7

\* Based on date of onset.

\*\* Reports are included from main and satellite clinics. Not all sites reporting.

Date of Report: 7-Apr-97

**FIGURE I. Selected sentinel reportable diseases, US Army Medical Treatment Facilities\*  
Cases per month, Apr 95 - Mar 97**



\* Reports are included from main and satellite clinics. Not all sites reporting.

**TABLE II. Reportable sexually transmitted diseases, US Army Medical Treatment Facilities\*  
March, 1997**

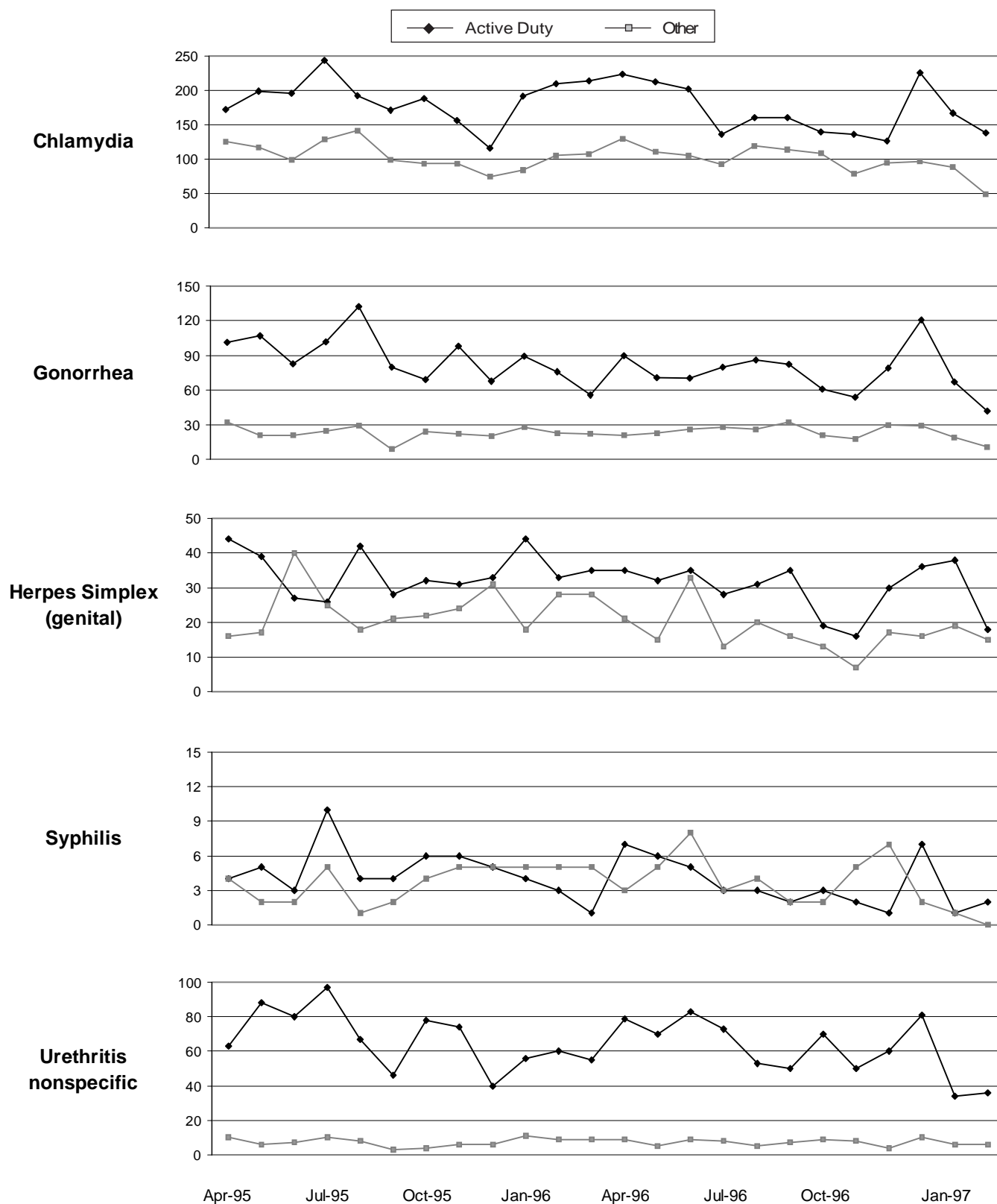
Reporting MTF/Post**	Chlamydia		Urethritis non-spec.		Gonorrhea		Herpes Simplex		Syphilis Prim/Sec		Syphilis Latent		Other STDs**	
	Cur. Month	Cum. 1997	Cur. Month	Cum. 1997	Cur. Month	Cum. 1997	Cur. Month	Cum. 1997	Cur. Month	Cum. 1997	Cur. Month	Cum. 1997	Cur. Month	Cum. 1997
<b>NORTH ATLANTIC RMC</b>														
Walter Reed AMC	3	14	-	3	3	7	3	8	-	-	-	-	-	-
Aberdeen Prov. Ground	-	1	-	-	-	7	-	-	-	-	-	-	-	-
FT Belvoir, VA	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FT Bragg, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FT Drum, NY	-	2	-	3	-	7	-	-	-	-	-	-	-	-
FT Eustis, VA	20	25	-	-	6	6	-	-	-	-	-	-	-	-
FT Knox, KY	5	11	-	-	1	14	6	8	-	-	-	-	-	-
FT Lee, VA	1	18	-	-	-	2	-	-	-	-	-	-	-	-
FT Meade, MD	-	7	2	4	-	1	1	2	-	-	-	-	-	-
USMA, West Point, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>CENTRAL RMC</b>														
Fitzsimons AMC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>GREAT PLAINS RMC</b>														
Brooke AMC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FT Carson, CO	32	70	22	57	2	12	-	13	-	-	-	1	-	-
FT Hood, TX	19	97	5	48	6	42	2	12	-	-	-	-	-	4
FT Leavenworth, KS	1	5	-	-	-	2	-	-	-	-	-	-	-	-
FT Leonard Wood, MO	3	11	1	4	1	8	-	-	-	-	-	-	-	-
FT Polk, LA	3	4	-	-	-	2	-	-	-	-	-	-	-	-
FT Riley, KS	5	18	-	-	1	1	-	-	-	-	1	1	-	-
FT Sill, OK	-	9	-	3	-	2	-	1	-	-	-	-	-	-
Panama	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>SOUTHEAST RMC</b>														
Eisenhower AMC	5	38	-	-	1	9	4	18	-	-	-	-	1	5
FT Benning, GA	-	11	-	-	-	8	-	6	-	-	-	-	-	-
FT Campbell, KY	12	74	-	-	11	39	1	7	-	-	1	1	-	-
FT Jackson, SC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FT McClellan, AL	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FT Rucker, AL	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FT Stewart, GA	-	14	-	25	-	20	-	10	-	-	-	-	-	-
<b>SOUTHWEST RMC</b>														
Wm Beaumont AMC	-	28	-	-	-	8	-	7	-	-	-	-	-	-
FT Huachuca, AZ	-	3	-	-	-	-	2	2	-	-	-	-	-	-
FT Irwin, CA	-	14	-	-	-	1	-	2	-	-	-	-	-	-
<b>NORTHWEST RMC</b>														
Madiqan AMC	5	48	-	5	1	19	1	7	-	-	-	-	-	-
FT Wainwright, AK	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>PACIFIC RMC</b>														
Tripler AMC	10	14	-	-	1	3	4	5	-	-	-	-	-	-
<b>OTHER LOCATIONS</b>														
Europe	16	97	1	6	4	30	-	4	-	-	-	-	-	-
Korea	-	2	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>140</b>	<b>635</b>	<b>31</b>	<b>158</b>	<b>38</b>	<b>250</b>	<b>24</b>	<b>112</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>9</b>

\* Reports are included from main and satellite clinics. Not all sites reporting.

Date of Report: 7-Apr-97

\*\* Other STDs: (a) Chancroid (b) Granuloma Inguinale (c) Lymphogranuloma Venereum (d) Syphilis unspec. (e) Syph, tertiary (f) Syph, congenital

**FIGURE II. Reportable sexually transmitted diseases, US Army Medical Treatment Facilities\*  
Cases per month, Apr 95 - Mar 97**



\* Reports are included from main and satellite clinics. Not all sites reporting.



### Update, Reportable Disease Compliance

## **Completeness and Timeliness of Required Disease Reporting: Reportable Hospitalizations among Active Duty Soldiers, CY 1996**

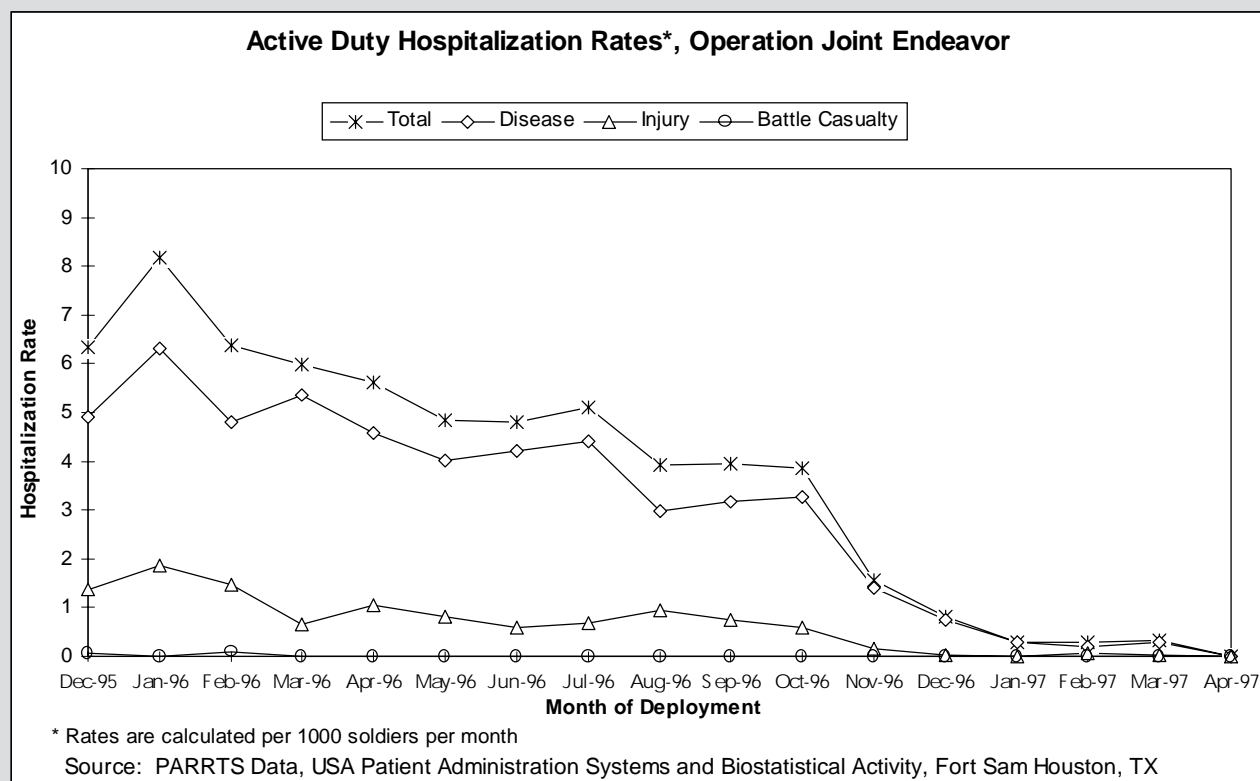
In 1994, the Office of the Surgeon General updated its requirement for reporting of diseases and conditions with special public health or military operational importance. An automated disease reporting system, called MSS, was developed and deployed to standardize and facilitate the collection, transmission, integration, summarization, and analysis of reportable disease information. Since its inception, more than 20,000 cases have been reported through the MSS. Since its beginning, however, it has been clear that some preventive medicine activities report completely, accurately, and in a timely manner while others, for a variety of reasons, report sporadically or not at all.

*Completeness, overall:* To estimate compliance with Army disease reporting requirements, the AMSA calculated the proportion of all "reportable" hospitalizations of active duty soldiers that were reported through the MSS. For estimation purposes, a "reportable" hospitalization was one that had a primary discharge diagnosis consistent with an Army reportable disease or condition. In 1995 and 1996 respectively, 29.8 % and 30.6 % of "reportable" hospitalizations of soldiers were reported through the MSS.

*Completeness, by installation:* For 1996, among installations with five or more reportable hospitalizations, reporting completeness ranged

*Continued on page 10*

### **Surveillance Trends, Bosnia**



*Bosnia Update***TABLE III. Active Duty Hospitalization Rates\*, Operation Joint Endeavor, 11Dec95 - 7Apr97**

ICD-9 Category	Males							Females							All
	< 20	20-24	25-29	30-34	35-39	>= 40	Total M	< 20	20-24	25-29	30-34	35-39	>= 40	Total F	
<b>Infectious and Parasitic Diseases</b>	7.5	3.3	2.6	2.9	1.8	0.7	<b>2.7</b>	5.1	3.5	4.3	6.3	0.0	0.0	<b>3.4</b>	<b>2.8</b>
<b>Neoplasms</b>	0.9	0.2	0.3	0.3	0.8	0.7	<b>0.4</b>	5.1	1.4	0.0	0.0	1.8	1.9	<b>1.1</b>	<b>0.5</b>
<b>Endocrine, Nutritional, and Metabolic Disease and Immunity Disorders</b>	0.9	0.2	0.6	0.5	0.3	1.2	<b>0.5</b>	0.0	0.7	0.0	5.1	0.0	0.0	<b>1.1</b>	<b>0.6</b>
<b>Diseases of the Blood and Blood-Forming Organs</b>	0.0	0.0	0.0	0.0	0.0	0.0	<b>0.0</b>	0.0	0.0	0.0	0.0	0.0	0.0	<b>0.0</b>	<b>0.0</b>
<b>Mental Disorders</b>	2.8	2.6	1.8	1.4	1.0	1.2	<b>1.8</b>	0.0	4.2	5.2	0.0	3.6	1.9	<b>3.2</b>	<b>2.0</b>
<b>Diseases of the Nervous System and Sense Organs</b>	3.8	2.0	2.6	1.2	3.1	1.0	<b>2.1</b>	0.0	2.1	5.2	5.1	3.6	0.0	<b>3.2</b>	<b>2.2</b>
<b>Diseases of the Circulatory System</b>	0.9	1.0	1.6	3.2	4.2	2.9	<b>2.1</b>	0.0	0.0	0.9	0.0	5.5	1.9	<b>1.1</b>	<b>2.0</b>
<b>Diseases of the Respiratory System</b>	0.0	3.0	2.2	2.7	1.6	2.2	<b>2.4</b>	0.0	7.7	3.4	2.5	3.6	1.9	<b>4.3</b>	<b>2.6</b>
<b>Diseases of the Digestive System</b>	7.5	7.4	6.1	5.4	3.9	3.2	<b>5.8</b>	20.3	7.7	6.9	2.5	9.1	1.9	<b>6.7</b>	<b>5.9</b>
<b>Diseases of the Genitourinary System</b>	0.9	2.4	3.3	3.4	2.9	2.9	<b>2.9</b>	0.0	23.1	12.9	3.8	5.5	7.6	<b>12.5</b>	<b>4.0</b>
<b>Complications of Pregnancy, Childbirth, and the Puerperium**</b>	0.0	0.0	0.0	0.0	0.0	0.0	<b>0.0</b>	0.0	2.1	0.9	1.3	0.0	0.0	<b>1.1</b>	<b>0.1</b>
<b>Diseases of the Skin and Subcutaneous Tissue</b>	3.8	2.2	1.1	1.2	0.8	0.7	<b>1.5</b>	0.0	1.4	0.0	2.5	1.8	0.0	<b>1.1</b>	<b>1.4</b>
<b>Diseases of Musculoskeletal System and Connective Tissue</b>	2.8	4.2	5.7	5.4	2.6	3.4	<b>4.5</b>	0.0	3.5	2.6	0.0	9.1	5.7	<b>3.4</b>	<b>4.4</b>
<b>Congenital Abnormalities</b>	0.9	0.4	0.3	0.2	0.3	0.0	<b>0.3</b>	0.0	0.0	0.0	0.0	0.0	0.0	<b>0.0</b>	<b>0.3</b>
<b>Symptoms, Signs, and ill-Defined Conditions</b>	2.8	5.4	4.9	5.1	3.9	2.7	<b>4.7</b>	35.5	19.6	7.8	10.1	5.5	3.8	<b>12.3</b>	<b>5.6</b>
<b>Injury and Poisoning</b>	7.5	11.7	9.1	7.8	5.4	2.7	<b>8.4</b>	15.2	16.8	4.3	3.8	7.3	0.0	<b>8.4</b>	<b>8.4</b>
<b>All Hospitalizations</b>	<b>43.1</b>	<b>46.0</b>	<b>42.3</b>	<b>40.8</b>	<b>32.4</b>	<b>25.5</b>	<b>40.0</b>	<b>81.1</b>	<b>93.9</b>	<b>54.3</b>	<b>43.1</b>	<b>56.4</b>	<b>26.8</b>	<b>62.8</b>	<b>42.7</b>

\* Rates are calculated per 1000 soldiers per year based on cumulative person time.

\*\* Includes normal delivery

Source: PARRTS Data, USA Patient Administration Systems and Biostatistical Activity, Fort Sam Houston, TX

Continued from page 8

from 0 to 91 %. Fort Leonard Wood had the largest number of reportable hospitalizations (n=33) and also the highest reporting compliance. Seven installations with at least five "reportable" active duty hospitalizations reported none of them. Table 3 shows the distribution of reportable hospitalizations (and percentages reported) by installation. Total confirmed reports received, broken down by STD and non-STD reports are also included in Table 3 for these same posts.

**Completeness, by disease/condition:** Table 1 summarizes completeness of reporting of hospitalized cases, by specific diseases/conditions. Leishmaniasis and malaria, two militarily important tropical infectious diseases, were reported most completely. Varicella (107 cases unreported) and rhabdomyolysis (72 cases unreported) accounted for nearly 70% of all unreported cases.

**Timeliness:** Table 2 summarizes time differences between dates of hospitalization and dates of MSS reports for reported hospitalized cases.

**Table 2. Timeliness of reporting, reportable hospitalizations among soldiers, CY 1996**

Interval	% in Interval	Cumulative %
< 1 week	64.4%	64.4%
1-2 weeks	14.4%	78.8%
2-3 weeks	6.7%	85.5%
3-4 weeks	2.9%	88.4%
1-2 months	8.7%	97.1%

Approximately two-thirds (64.4%) of cases were reported to the MSS within one week of the hospitalization — more than 40% were reported within three days (data not shown). Almost 90% of cases were reported within a month.

**Editorial Comment:** This analysis suggests that disease reporting in the Army is timely (when it occurs) but incomplete. Poor compliance with Army required reporting may result from several

**Table 1. Completeness of reporting, reportable hospitalizations among soldiers, CY 1996**

	Reportable hospitalizations	Number reported	% Reported
Leishmaniasis	27	22	81.5%
Malaria	18	12	66.7%
Heat exhaustion	16	5	31.3%
Varicella	151	44	29.1%
Rhabdomyolysis	98	26	26.5%
Lyme disease	5	1	20.0%
Pneumococcal pneumonia	20	2	10.0%
Cold injury	22	2	9.1%
Hepatitis	6	0	0.0%
Carbon monoxide intoxication	6	0	0.0%
Dengue	1	0	0.0%
Campylobacteriosis	1	0	0.0%
Syphilis	1	0	0.0%
<b>Total</b>	<b>372</b>	<b>114</b>	<b>30.6%</b>

factors including the following:

- Ignorance of or unfamiliarity with either reporting requirements or the list of reportable diseases/conditions. Poor compliance, for example, with reporting varicella and rhabdomyolysis may reflect widespread ignorance of the Army requirement to report these conditions. Confusion may be exacerbated at installations where local requirements (e.g., county, state) differ significantly from Army requirements. Finally, unless informed by the local preventive medicine staff, physicians and other careproviders at Army medical treatment facilities are unlikely to know of the Army's reporting requirements or the diseases/conditions that must be reported.

- No or inadequate systems of identifying reportable diseases/conditions. Preventive medicine activities that have only "passive" systems of identifying reportable conditions are likely to perform worse in ascertaining reportable conditions

than those that have "active" systems.

- Difficulty accessing or operating the computer and telecommunications hardware and software required to report to the MSS. Preventive medicine activities may have difficulty processing and transmitting case reports due to outdated computers and/or poor access to modems or telephone lines.

These categories of problems exist to greater or lesser degrees at all Army installations throughout the world. With appropriate attention and effort, however, all can be relatively easily reduced or eliminated as obstacles to effective reportable disease surveillance and reporting.

Fort Leonard Wood has demonstrated that a small preventive medicine activity with a relatively high case reporting demand can execute this important mission with great success. Its performance should be an example to other Army preventive medicine activities.

**Table 3. Reporting completeness by MTF, 1996**

Percent reportable hospitalizations submitted (number reported / total number)	MTF	Hospitalizations*		All reports		
		Number reported	Total	Reports received 1996	Non-STD reports received	STD reports received
A	A	30	33	297	187	110
B	B	12	19	151	120	31
C	C	3	6	10	10	0
D	D	7	15	118	32	86
E	E	11	29	238	78	160
F	F	6	16	31	28	3
G	G	6	18	526	98	428
H	H	7	31	77	77	0
I	I	1	5	85	41	44
J	J	3	20	681	141	540
K	K	1	8	255	32	223
L	L	1	9	264	26	238
M	M	2	18	240	24	216
N	N	1	9	692	76	616
O	O	1	10	423	16	407
P	P	0	8	7	3	4
Q	Q	0	14	49	0	49
R	R	0	8	31	5	26
S	S	0	13	205	26	179
T	T	0	7	312	4	308
U	U	0	6	49	12	37
V	V	0	40	345	75	270

\* Active Duty only

*Continued from page 3*

days were lost for every 1000 soldiers on active duty—less than half the number in 1995 (1,202 days per 1000). Noneffective rates declined among both males and females—and for all disease categories. Teenaged male and female soldiers were the only subgroups with increases in noneffective rates over the last year: +13.9% and +13.5%, respectively.

**Gender:** Hospitalization and noneffective rates were more than 2.5 times higher among female than male soldiers (female-to-male (F:M) hospitalization rate ratio: 2.63:1; F:M noneffective rate ratio: 2.82:1). When hospitalizations related to pregnancy, childbirth, and the puerperium were excluded, the F:M hospitalization rate ratio was 1.72:1 and the F:M noneffective rate ratio was 1.63:1.

Among men, musculoskeletal and connective tissue disorders accounted for more than one fourth (28.2%) of all hospitalizations while mental disorders accounted for approximately one fourth (25.4%) of all hospital sick days. Among women, hospitalizations related to pregnancy, childbirth, and the puerperium accounted for more than one third (34.6%) of all hospitalizations and more than 40% of all sick days. When this category of female-specific hospitalizations was excluded from analyses, the experiences of women and men were similar regarding attributable disease and injury causes. For example, among women, musculoskeletal and connective tissue disorders accounted for approximately one fifth (20.3%) of non-pregnancy-related hospitalizations and mental disorders accounted for nearly one fourth (24.6%) of noneffective days.

**Age:** Hospitalization and noneffective rates were highest in the extremes of the age range of soldiers. For example, hospitalization rates were highest among the oldest of the males ( $\geq 40$  years)

and the youngest of the females ( $< 20$  years).

**Editorial comment:** From a medical surveillance standpoint, it is difficult to interpret the recent large reductions in hospitalizations and noneffective rates among soldiers. Much of the decline is undoubtedly attributable to more aggressive health services utilization management. However, several findings do have medical surveillance significance.

First, musculoskeletal conditions are the leading cause of hospitalizations among soldiers—and if injuries (which are categorized separately) are combined with musculoskeletal conditions, then fractures, strains, sprains, contusions, ligament, tendon, and cartilage tears, and other traumatic and overuse injuries were by far the leading category of hospitalizations overall—and in most demographic subgroups.

Second, mental disorders are the leading cause of hospital-related noneffective days—overall and in most demographic subgroups. Lengthy hospitalizations are frequently required to treat disorders related to alcohol dependence, adjustment reactions, and affective and schizophrenic psychotic disorders.

Finally, in the face of very large declines in hospitalizations and noneffective days in the Army overall, noneffective rates increased among teen-aged soldiers who are either in initial training or their first duty assignments.

Together, these findings suggest the need for concerted health promotion and preventive medicine programs that are focused on trainees, first term soldiers, and their commanders and cadre. The program should emphasize occupational, vehicular, and recreational safety, physical and military training techniques, and mental health (particularly in relation to alcohol abuse and stress management).

ARD Surveillance Update

Legend		
—	ARD Rate	= (ARD cases / Trainees) * 100
■ ■ ■	SASI*	= ARD Rate * Strep Rate**

Ft Benning

Ft Jackson

Ft Knox

Ft Leonard  
Wood

Ft McClellan

Ft Sill

Table IV. ARD surveillance rates, submitted by Army TRADOC posts

\* Strep/ARD Surveillance Index (SASI)

\*\*Strep Rate= (GABHS(+) / Cultures) \*100

Note: SASI has proven to be a reliable predictor of serious strep-related morbidity, especially acute rheumatic fever.

*Supplement #1 (Hospitalization Summary, 1996)***TABLE S1. Active Duty Hospitalizations, United States Army, 1996**

ICD-9 Category	Males							Females							All
	< 20	20-24	25-29	30-34	35-39	>= 40	Total M	< 20	20-24	25-29	30-34	35-39	>= 40	Total F	
<b>Infectious and Parasitic Diseases</b>	213	460	237	166	90	95	<b>1261</b>	136	157	70	37	15	12	<b>427</b>	<b>1688</b>
<b>Neoplasms</b>	26	148	171	153	178	266	<b>942</b>	13	80	80	105	131	144	<b>553</b>	<b>1495</b>
<b>Endocrine, Nutritional, and Metabolic Disease and Immunity Disorders</b>	24	74	57	34	43	65	<b>297</b>	10	38	36	48	22	18	<b>172</b>	<b>469</b>
<b>Diseases of the Blood and Blood-Forming Organs</b>	4	26	23	21	19	16	<b>109</b>	10	15	3	5	4	11	<b>48</b>	<b>157</b>
<b>Mental Disorders</b>	379	1327	721	444	373	264	<b>3508</b>	157	364	171	134	86	72	<b>984</b>	<b>4492</b>
<b>Diseases of the Nervous System and Sense Organs</b>	106	356	255	231	234	274	<b>1456</b>	35	91	77	67	68	92	<b>430</b>	<b>1886</b>
<b>Diseases of the Circulatory System</b>	43	216	224	209	262	559	<b>1513</b>	11	27	32	29	30	46	<b>175</b>	<b>1688</b>
<b>Diseases of the Respiratory System</b>	579	1054	567	373	265	276	<b>3114</b>	249	331	133	92	62	40	<b>907</b>	<b>4021</b>
<b>Diseases of the Digestive System</b>	325	1798	1078	732	734	898	<b>5565</b>	163	485	259	163	135	123	<b>1328</b>	<b>6893</b>
<b>Diseases of the Genitourinary System</b>	59	298	280	239	189	206	<b>1271</b>	101	444	337	302	234	228	<b>1646</b>	<b>2917</b>
<b>Complications of Pregnancy, Childbirth, and the Puerperium*</b>	-	-	-	-	-	-	-	284	2693	1570	760	274	39	<b>5620</b>	<b>5620</b>
<b>Diseases of the Skin and Subcutaneous Tissue</b>	123	318	172	108	103	84	<b>908</b>	31	52	30	32	23	25	<b>193</b>	<b>1101</b>
<b>Diseases of Musculoskeletal System and Connective Tissue</b>	612	2898	2487	1761	1549	1408	<b>10715</b>	236	639	441	288	299	249	<b>2152</b>	<b>12867</b>
<b>Congenital Abnormalities</b>	47	121	65	36	29	38	<b>336</b>	8	36	18	13	8	7	<b>90</b>	<b>426</b>
<b>Symptoms, Signs, and ill-Defined Conditions</b>	120	374	249	266	290	422	<b>1721</b>	71	145	102	73	64	63	<b>518</b>	<b>2239</b>
<b>Injury and Poisoning</b>	342	1698	1076	689	402	322	<b>4529</b>	69	228	144	76	51	36	<b>604</b>	<b>5133</b>
<b>Disease, not fully coded</b>	29	190	157	90	104	122	<b>692</b>	18	122	87	69	39	28	<b>363</b>	<b>1055</b>
<b>Injury, not fully coded</b>	3	31	18	7	4	3	<b>66</b>	1	5	3	1	0	0	<b>10</b>	<b>76</b>
<b>All Hospitalizations</b>	<b>3034</b>	<b>11387</b>	<b>7837</b>	<b>5559</b>	<b>4868</b>	<b>5318</b>	<b>38003</b>	<b>1603</b>	<b>5952</b>	<b>3593</b>	<b>2294</b>	<b>1545</b>	<b>1233</b>	<b>16220</b>	<b>54223</b>

\* Includes normal delivery

Source: Individual Patient Data System, USA Patient Administration Systems and Biostatistical Activity, Fort Sam Houston, TX

**TABLE S2. Active Duty Hospitalization Rates, United States Army, 1996\***

ICD-9 Category	Males							Females							All
	< 20	20-24	25-29	30-34	35-39	>= 40	Total M	< 20	20-24	25-29	30-34	35-39	>= 40	Total F	
<b>Infectious and Parasitic Diseases</b>	7.8	3.6	2.4	2.2	1.6	2.5	<b>3.0</b>	23.9	7.1	4.3	3.3	1.9	2.4	<b>6.3</b>	<b>3.5</b>
<b>Neoplasms</b>	0.9	1.2	1.8	2.1	3.2	6.9	<b>2.2</b>	2.3	3.6	4.9	9.4	16.6	28.8	<b>8.1</b>	<b>3.1</b>
<b>Endocrine, Nutritional, and Metabolic Disease and Immunity Disorders</b>	0.9	0.6	0.6	0.5	0.8	1.7	<b>0.7</b>	1.8	1.7	2.2	4.3	2.8	3.6	<b>2.5</b>	<b>1.0</b>
<b>Diseases of the Blood and Blood-Forming Organs</b>	0.1	0.2	0.2	0.3	0.3	0.4	<b>0.3</b>	1.8	0.7	0.2	0.4	0.5	2.2	<b>0.7</b>	<b>0.3</b>
<b>Mental Disorders</b>	13.8	10.5	7.4	6.0	6.7	6.8	<b>8.4</b>	27.5	16.4	10.5	12.0	10.9	14.4	<b>14.4</b>	<b>9.2</b>
<b>Diseases of the Nervous System and Sense Organs</b>	3.9	2.8	2.6	3.1	4.2	7.1	<b>3.5</b>	6.1	4.1	4.7	6.0	8.6	18.4	<b>6.3</b>	<b>3.9</b>
<b>Diseases of the Circulatory System</b>	1.6	1.7	2.3	2.8	4.7	14.4	<b>3.6</b>	1.9	1.2	2.0	2.6	3.8	9.2	<b>2.6</b>	<b>3.5</b>
<b>Diseases of the Respiratory System</b>	21.1	8.3	5.8	5.0	4.7	7.1	<b>7.4</b>	43.7	15.0	8.1	8.2	7.9	8.0	<b>13.3</b>	<b>8.2</b>
<b>Diseases of the Digestive System</b>	11.9	14.2	11.1	9.9	13.1	23.2	<b>13.2</b>	28.6	21.9	15.8	14.6	17.1	24.6	<b>19.5</b>	<b>14.1</b>
<b>Diseases of the Genitourinary System</b>	2.2	2.4	2.9	3.2	3.4	5.3	<b>3.0</b>	17.7	20.1	20.6	27.1	29.6	45.6	<b>24.1</b>	<b>6.0</b>
<b>Complications of Pregnancy, Childbirth, and the Puerperium**</b>	-	-	-	-	-	-	-	49.8	121.7	96.1	68.1	34.7	7.8	<b>82.4</b>	<b>11.5</b>
<b>Diseases of the Skin and Subcutaneous Tissue</b>	4.5	2.5	1.8	1.5	1.8	2.2	<b>2.2</b>	5.4	2.3	1.8	2.9	2.9	5.0	<b>2.8</b>	<b>2.3</b>
<b>Diseases of Musculoskeletal System and Connective Tissue</b>	22.3	22.9	25.5	23.8	27.6	36.4	<b>25.5</b>	41.4	28.9	27.0	25.8	37.9	49.8	<b>31.5</b>	<b>26.4</b>
<b>Congenital Abnormalities</b>	1.7	1.0	0.7	0.5	0.5	1.0	<b>0.8</b>	1.4	1.6	1.1	1.2	1.0	1.4	<b>1.3</b>	<b>0.9</b>
<b>Symptoms, Signs, and ill-Defined Conditions</b>	4.4	3.0	2.6	3.6	5.2	10.9	<b>4.1</b>	12.5	6.6	6.2	6.5	8.1	12.6	<b>7.6</b>	<b>4.6</b>
<b>Injury and Poisoning</b>	12.5	13.4	11.0	9.3	7.2	8.3	<b>10.8</b>	12.1	10.3	8.8	6.8	6.5	7.2	<b>8.9</b>	<b>10.5</b>
<b>Disease, not fully coded</b>	1.1	1.5	1.6	1.2	1.9	3.2	<b>1.6</b>	3.2	5.5	5.3	6.2	4.9	5.6	<b>5.3</b>	<b>2.2</b>
<b>Injury, not fully coded</b>	0.1	0.2	0.2	0.1	0.1	0.1	<b>0.2</b>	0.2	0.2	0.2	0.1	0.0	0.0	<b>0.1</b>	<b>0.2</b>
<b>All Hospitalizations</b>	<b>110.8</b>	<b>90.1</b>	<b>80.4</b>	<b>75.1</b>	<b>86.9</b>	<b>137.4</b>	<b>90.5</b>	<b>281.1</b>	<b>269.0</b>	<b>219.8</b>	<b>205.5</b>	<b>195.6</b>	<b>246.4</b>	<b>237.7</b>	<b>111.1</b>

\* Rates are calculated per 1000 soldiers per year based on cumulative person time.

\*\* Includes normal delivery

Source: Individual Patient Data System, USA Patient Administration Systems and Biostatistical Activity, Fort Sam Houston, TX



TABLE S3. Total Active Duty Hospital Sickdays, United States Army, 1996\*

ICD-9 Category	Males							Females							All
	< 20	20-24	25-29	30-34	35-39	>= 40	Total M	< 20	20-24	25-29	30-34	35-39	>= 40	Total F	
Infectious and Parasitic Diseases	1030	2394	1121	1445	383	669	7042	359	498	187	127	37	41	1249	8291
Neoplasms	683	2127	1757	1421	1038	1679	8705	24	352	214	486	758	933	2767	11472
Endocrine, Nutritional, and Metabolic Disease and Immunity Disorders	48	422	374	164	175	297	1480	17	294	178	116	117	45	767	2247
Diseases of the Blood and Blood-Forming Organs	8	130	70	79	72	45	404	11	20	9	7	10	121	178	582
Mental Disorders	4049	17353	10228	6463	6852	4350	49295	1359	4015	2309	2365	1466	1130	12644	61939
Diseases of the Nervous System and Sense Organs	355	1866	1420	934	1010	793	6378	101	266	337	457	379	406	1946	8324
Diseases of the Circulatory System	91	658	1227	1489	1765	2537	7767	211	90	120	90	127	423	1061	8828
Diseases of the Respiratory System	1354	2877	1621	1069	551	824	8296	412	655	269	213	102	83	1734	10030
Diseases of the Digestive System	1009	4540	3446	2622	1905	2264	15786	417	1086	985	691	454	560	4193	19979
Diseases of the Genitourinary System	173	867	958	561	730	882	4171	220	1240	874	1222	647	1099	5302	9473
Complications of Pregnancy, Childbirth, and the Puerperium**	-	-	-	-	-	-	-	1995	19438	10020	4545	1355	158	37511	37511
Diseases of the Skin and Subcutaneous Tissue	400	1177	672	452	275	593	3569	85	103	151	141	35	46	561	4130
Diseases of Musculoskeletal System and Connective Tissue	1417	9031	6813	7019	5441	5291	35012	175	1624	1498	693	846	717	5553	40565
Congenital Abnormalities	236	360	171	149	95	91	1102	8	49	54	13	8	73	205	1307
Symptoms, Signs, and ill-Defined Conditions	249	1225	885	960	1124	875	5318	245	856	678	428	247	193	2647	7965
Injury and Poisoning	1799	9969	5561	3172	2611	2217	25329	297	1211	787	696	310	249	3550	28879
Disease, not fully coded	530	3997	3036	1856	2103	1868	13390	184	2389	1388	1175	942	661	6739	20129
Injury, not fully coded	20	639	222	33	39	15	968	3	9	250	8	0	0	270	1238
All Hospitalizations	13451	59632	115822	29888	26169	25290	194012	6123	34195	20308	13473	7840	6938	88877	282889

\* Includes bed days, convalescent sickdays and medical hold days

\*\* Includes normal delivery

Source: Individual Patient Data System, USA Patient Administration Systems and Biostatistical Activity, Fort Sam Houston, TX

**TABLE S4. Non-Effective Rates, Active Duty Hospitalizations, United States Army, 1996\***

ICD-9 Category	Males							Females							All
	< 20	20-24	25-29	30-34	35-39	>= 40	Total M	< 20	20-24	25-29	30-34	35-39	>= 40	Total F	
<b>Infectious and Parasitic Diseases</b>	37.6	18.9	11.5	19.5	6.8	17.3	<b>16.8</b>	63.0	22.5	11.4	11.4	4.7	8.2	<b>18.3</b>	<b>17.0</b>
<b>Neoplasms</b>	24.9	16.8	18.0	19.2	18.5	43.4	<b>20.7</b>	4.2	15.9	13.1	43.5	96.0	186.5	<b>40.5</b>	<b>23.5</b>
<b>Endocrine, Nutritional, and Metabolic Disease and Immunity Disorders</b>	1.8	3.3	3.8	2.2	3.1	7.7	<b>3.5</b>	3.0	13.3	10.9	10.4	14.8	9.0	<b>11.2</b>	<b>4.6</b>
<b>Diseases of the Blood and Blood-Forming Organs</b>	0.3	1.0	0.7	1.1	1.3	1.2	<b>1.0</b>	1.9	0.9	0.6	0.6	1.3	24.2	<b>2.6</b>	<b>1.2</b>
<b>Mental Disorders</b>	147.8	137.3	104.9	87.3	122.3	112.4	<b>117.4</b>	238.3	181.4	141.3	211.9	185.6	225.8	<b>185.3</b>	<b>126.9</b>
<b>Diseases of the Nervous System and Sense Organs</b>	13.0	14.8	14.6	12.6	18.0	20.5	<b>15.2</b>	17.7	12.0	20.6	40.9	48.0	81.1	<b>28.5</b>	<b>17.0</b>
<b>Diseases of the Circulatory System</b>	3.3	5.2	12.6	20.1	31.5	65.6	<b>18.5</b>	37.0	4.1	7.3	8.1	16.1	84.5	<b>15.5</b>	<b>18.1</b>
<b>Diseases of the Respiratory System</b>	49.4	22.8	16.6	14.4	9.8	21.3	<b>19.8</b>	72.3	29.6	16.5	19.1	12.9	16.6	<b>25.4</b>	<b>20.5</b>
<b>Diseases of the Digestive System</b>	36.8	35.9	35.4	35.4	34.0	58.5	<b>37.6</b>	73.1	49.1	60.3	61.9	57.5	111.9	<b>61.4</b>	<b>40.9</b>
<b>Diseases of the Genitourinary System</b>	6.3	6.9	9.8	7.6	13.0	22.8	<b>9.9</b>	38.6	56.0	53.5	109.5	81.9	219.6	<b>77.7</b>	<b>19.4</b>
<b>Complications of Pregnancy, Childbirth, and the Puerperium**</b>	-	-	-	-	-	-	-	349.9	878.4	613.1	407.2	171.6	31.6	<b>549.7</b>	<b>76.8</b>
<b>Diseases of the Skin and Subcutaneous Tissue</b>	14.6	9.3	6.9	6.1	4.9	15.3	<b>8.5</b>	14.9	4.7	9.2	12.6	4.4	9.2	<b>8.2</b>	<b>8.5</b>
<b>Diseases of Musculoskeletal System and Connective Tissue</b>	51.7	71.5	69.9	94.8	97.1	136.7	<b>83.4</b>	30.7	73.4	91.7	62.1	107.1	143.3	<b>81.4</b>	<b>83.1</b>
<b>Congenital Abnormalities</b>	8.6	2.8	1.8	2.0	1.7	2.4	<b>2.6</b>	1.4	2.2	3.3	1.2	1.0	14.6	<b>3.0</b>	<b>2.7</b>
<b>Symptoms, Signs, and ill-Defined Conditions</b>	9.1	9.7	9.1	13.0	20.1	22.6	<b>12.7</b>	43.0	38.7	41.5	38.3	31.3	38.6	<b>38.8</b>	<b>16.3</b>
<b>Injury and Poisoning</b>	65.7	78.9	57.0	42.8	46.6	57.3	<b>60.3</b>	52.1	54.7	48.2	62.4	39.3	49.8	<b>52.0</b>	<b>59.1</b>
<b>Disease, not fully coded</b>	19.4	31.6	31.1	25.1	37.5	48.3	<b>31.9</b>	32.3	108.0	84.9	105.3	119.3	132.1	<b>98.8</b>	<b>41.2</b>
<b>Injury, not fully coded</b>	0.7	5.1	2.3	0.4	0.7	0.4	<b>2.3</b>	0.5	0.4	15.3	0.7	0.0	0.0	<b>4.0</b>	<b>2.5</b>
<b>All Hospitalizations</b>	<b>491</b>	<b>472</b>	<b>406</b>	<b>404</b>	<b>467</b>	<b>654</b>	<b>462</b>	<b>1074</b>	<b>1545</b>	<b>1243</b>	<b>1207</b>	<b>993</b>	<b>1386</b>	<b>1302</b>	<b>579</b>

\* Rates are calculated as hospital sickdays per 1000 soldiers per year based on cumulative person time.

\*\* Includes normal delivery

Source: Individual Patient Data System, USA Patient Administration Systems and Biostatistical Activity, Fort Sam Houston, TX

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*Surveillance Trends, Reportable Diseases***Sentinel Reportable Diseases, Calendar Years 1995 – 1996**

The accompanying figures summarize reports of sentinel reportable diseases during calendar years 1995 and 1996.

*Arthropod-borne:* Between 1995 and 1996, reports of Lyme disease (1995: 4, 1996: 11) and malaria (1995: 22, 1996: 27) increased among soldiers. Among other beneficiaries, Lyme disease reports decreased (1995: 14, 1996: 9), and malaria reports were unchanged (n=6).

*Heat/cold exposure, exertion:* Among soldiers, there was a 46% decline in heat injury reports between 1995 (n=130) and 1996 (n=70). For the same period, heat injury reports for other beneficiaries also declined (1995: 49, 1996: 41). In contrast, cold injury reports among soldiers significantly increased (+78%) in 1996 (n=213) compared to 1995 (n=120). Much of the increase was attributable to a single large cluster during the severe weather of January 1996. Finally, there were not significant trends in reports of rhabdomyolysis among soldiers (1995: 32, 1996: 29) or other beneficiaries (1995: 5, 1996: 9).

*Fecal-oral:* Among soldiers, there were increases in reports of campylobacteriosis (1995: 35, 1996: 43), giardiasis (1995: 21, 1996: 38), shigella (1995: 18, 1996: 29), and hepatitis A

(1995: 13, 1996: 20) – only salmonella reports declined (1995: 48, 1996: 42). Among other beneficiaries, there were increases in all fecal-orally transmitted sentinel diseases: campylobacteriosis (1995: 71, 1996: 90), giardiasis (1995: 51, 1996: 63), salmonella (1995: 123, 1996: 162), shigella (1995: 65, 1996: 89), and hepatitis A (1995: 11, 1996: 18).

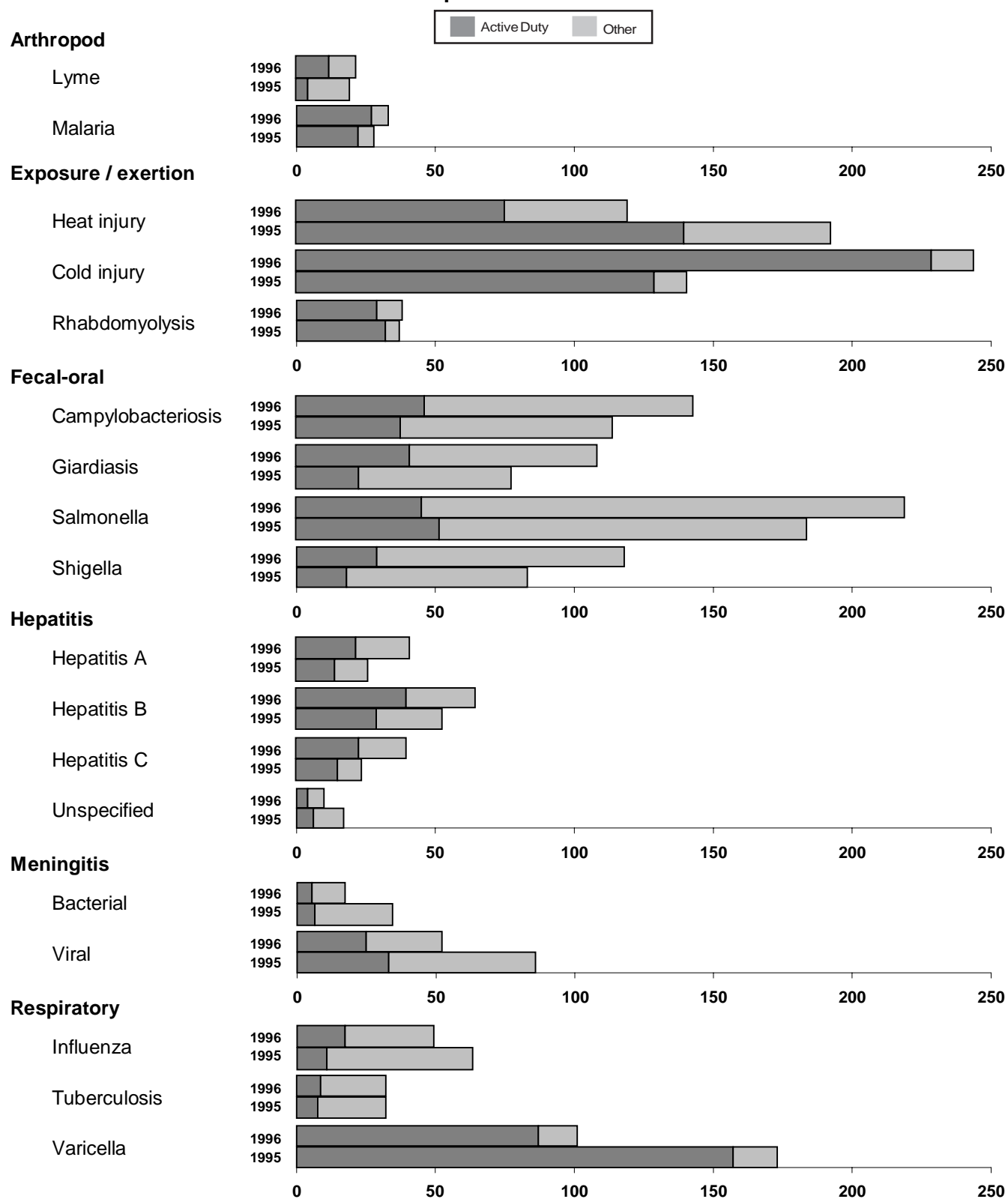
*Hepatitis:* There were increases in reports of hepatitis A (1995: 13, 1996: 20), B (1995: 27, 1996: 37), and C (1995: 14, 1996: 21) among soldiers. Reports of hepatitis A (1995: 11, 1996: 18), B (1995: 22, 1996: 23), and C (1995: 8, 1996: 16) also increased among other beneficiaries.

*Meningitis:* Meningitis case reports declined among soldiers (bacterial: 1995: 6, 1996: 5; viral: 1995: 33, 1996: 25) and other beneficiaries (bacterial: 1995: 26, 1996: 11; viral: 1995: 53, 1996: 27).

*Respiratory:* Among soldiers, varicella case reports declined by 45% between 1995 (n=157) and 1996 (n=87). Influenza reports among other beneficiaries also declined (1995: 49, 1996: 30). There were not significant trends in reports of influenza or tuberculosis among soldiers.

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**FIGURE III. Sentinel Reportable Diseases, United States Army\***  
**Comparison of 1996 to 1995**



\* Based on date of onset.

\*\* Reports are included from main and satellite clinics. Not all sites reporting.

Date of Report: 7-Apr-97

Supplement #2 (Reportable Diseases Summary, 1996)**TABLE S5. Reportable sexually transmitted diseases, US Army Medical Treatment Facilities\*, 1996**

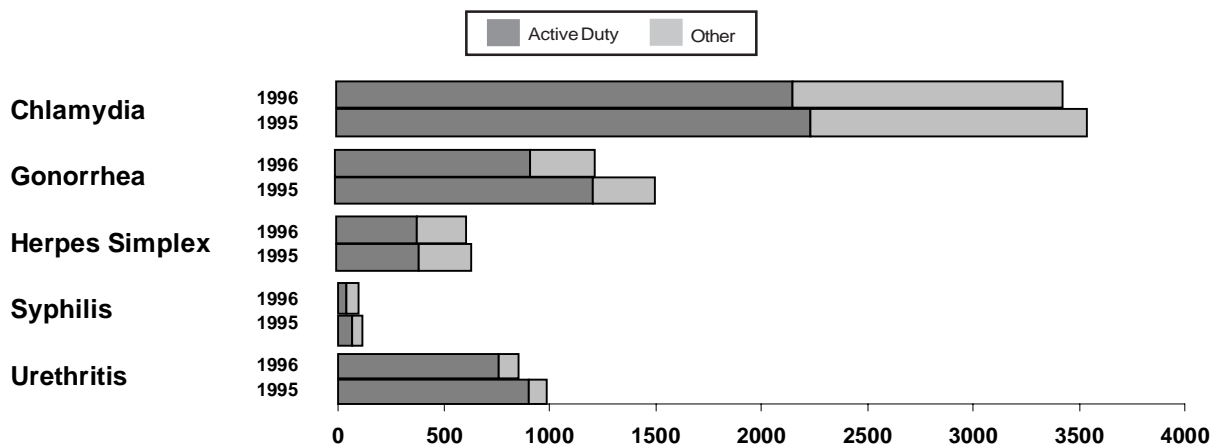
Reporting MTF/Post**	Chlamydia				Urethritis non-spec.				Gonorrhea				Herpes Simplex				Syphilis Prim/Sec				Syphilis Latent			
	Active Duty		Other		Active Duty		Other		Active Duty		Other		Active Duty		Other		Active Duty		Other		Active Duty		Other	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
<b>NORTH ATLANTIC RMC</b>																								
Walter Reed AMC	15	17	10	48	28	-	14	-	9	2	10	21	5	19	15	14			3	4	-	-	-	-
Aberdeen Prov. Ground	1	9	1	7	16	-	2	-	13	1	-	-	-	2		1	-	-	-	-	-	-	-	-
FT Belvoir, VA	3	9	4	13	15	-	2	1	13	1	3	3	-	2		1	-	-	-	-	-	-	-	-
FT Bragg, NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FT Drum, NY	24	34	1	14	22	-	-	-	48	9	1	9	9	4		2	-	-	-	-	-	-	-	-
FT Eustis, VA	12	23	6	29	-	-	-	-	8	3	5	6	-	-	-	-	-	-	-	-	-	-	-	-
FT Knox, KY	56	25	6	58	-	-	-	-	42	9	1	12	37	3	1	21	4	-	-	1	-	-	-	-
FT Lee, VA	16	47	7	21	-	-	1	-	19	8	9	4		2			-	-	-	-	-	-	-	-
FT Meade, MD	5	6	8	16	13	-	19	-	-	-	4	2	6	5	5	6	-	-	-	-	-	-	-	-
USMA, West Point, NY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>CENTRAL RMC</b>																								
Fitzsimons AMC	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
<b>GREAT PLAINS RMC</b>																								
Brooke AMC	-	1	2	6	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
FT Carson, CO	119	84	10	86	282	-	26	-	65	11	8	17	9	7	3	15	-	-	-	1	-	-	-	-
FT Hood, TX	103	98	3	61	93	1	2	-	53	20	5	9	17	12	1	5	-	-	-	-	-	-	-	-
FT Leavenworth, KS	2	4	1	13	-	-	-	-	2	-	-	5	1	1		2	-	-	-	-	-	-	-	-
FT Leonard Wood, MO	13	24	7	41	28	-	12	-	12	6	4	5	1	-	-	2	-	-	-	-	-	-	-	-
FT Polk, LA	4	22		10	-	-	-	-	13	3	-	1	1	1	-	-	-	-	-	-	-	-	-	-
FT Riley, KS	37	27	6	37	-	-	-	-	16	7	-	5	1	1	-	-	-	-	-	-	-	-	-	-
FT Sill, OK	68	28	8	45	36	1	2	1	49	12	7	12	12	3	-	1	-	-	-	-	-	-	-	-
Panama	6	7	9	66	-	-	-	-	2	1	1	2	3	1	1	3	-	-	-	-	-	-	-	-
<b>SOUTHEAST RMC</b>																								
Eisenhower AMC	46	60	11	55	1	-	-	-	32	12	7	13	23	23	1	31	-	-	-	-	-	-	-	-
FT Benning, GA	-	-	-	2	-	-	-	-	1	1		1		1	-	-	-	-	-	-	-	-	-	-
FT Campbell, KY	78	204	3	133	1	-	-	-	94	29	8	18	23	1	-	2	-	-	-	-	-	-	-	-
FT Jackson, SC	9	264	1	5	-	-	-	-	6	7	1	1		10	1	-	-	-	-	-	-	-	-	-
FT McClellan, AL	3	6	3	7	-	-	-	-	2	2	7	4	-	-	-	-	-	-	-	-	-	-	-	-
FT Rucker, AL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FT Stewart, GA	7	47	1	29	186	3	9	-	75	13	3	12	15	12		15	1	1		-	-	-	-	-
<b>SOUTHWEST RMC</b>																								
Wm Beaumont AMC	51	48	4	126	-	-	-	-	15	3	3	4	5	33	4	32	1	-	-	3	-	-	-	-
FT Huachuca, AZ	12	17	4	16	-	-	-	-	5	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-
FT Irwin, CA	12	7	2	12	-	-	-	-	7	1	-	5	2	-	-	-	1	-	-	-	-	-	-	-
<b>NORTHWEST RMC</b>																								
Madigan AMC	8	8	3	14	-	-	-	-	7	3	-	1	-	-	-	-	-	-	-	1	-	-	-	-
FT Wainwright, AK	7	7		9	-	-	-	-	1		-	1	1	2	-	-	-	-	-	-	-	-	-	-
<b>PACIFIC RMC</b>																								
Tripler AMC	70	46	7	66	15	-	2	-	37	7	1	13	16	19	7	32	2	-	-	-	-	-	-	-
<b>OTHER LOCATIONS</b>																								
Europe	70	62	12	54	15	2	-	-	57	12	8	11	11	7	1	2	-	-	-	-	-	-	-	-
Korea	1	12	-	3	-	-	-	-	3	1	2	-	1	3	-	1	-	-	-	-	-	-	-	-
<b>Sub-Total</b>	<b>858</b>	<b>1253</b>	<b>140</b>	<b>1103</b>	<b>751</b>	<b>7</b>	<b>91</b>	<b>2</b>	<b>706</b>	<b>185</b>	<b>100</b>	<b>198</b>	<b>199</b>	<b>174</b>	<b>40</b>	<b>188</b>	<b>9</b>	<b>1</b>	<b>4</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total</b>	<b>2111</b>		<b>1243</b>		<b>758</b>		<b>93</b>		<b>891</b>		<b>298</b>		<b>373</b>		<b>228</b>		<b>10</b>		<b>14</b>		<b>0</b>		<b>0</b>	

\* Active Duty refers to Army Active Duty only.

\*\* Reports are included from main and satellite clinics. Not all sites reporting.

Date of Report: 7-Apr-97

**FIGURE IV. Sentinel Reportable Diseases, United States Army\***  
**Comparison of 1996 to 1995**

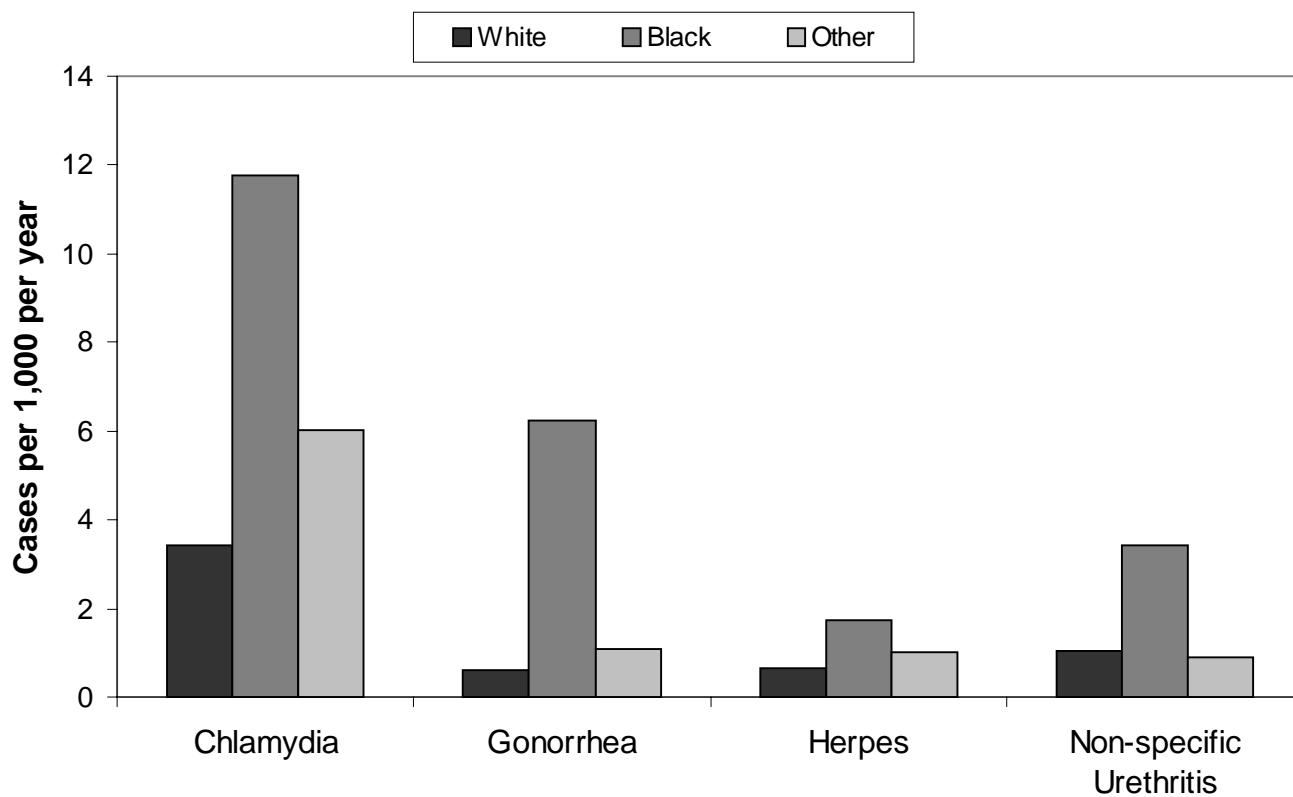


\* Based on date of onset.

\*\* Reports are included from main and satellite clinics. Not all sites reporting.

Date of Report: 7-Apr-97

**FIGURE V. Selected sexually transmitted diseases by race/ethnicity, 1996**



**TABLE S6. Reportable conditions reported through Medical Surveillance System, Jan-Dec 1996\***

Diagnosis	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total	Diagnosis	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
Amebiasis	2	5	0	2	9	Malaria, unspecified	0	1	1	2	4
Anthrax	0	0	0	0	0	Malaria, vivax	3	1	7	2	13
Arboviral fever, unsp.	0	0	0	0	0	Malaria, falciparum	1	6	3	2	12
Asbestosis	0	0	0	0	0	Malaria, malariae	0	0	0	0	0
Botulism	0	0	0	0	0	Malaria, ovale	0	0	0	0	0
Brucellosis	0	0	0	0	0	Measles	0	2	1	1	4
Campylobacteriosis	22	30	41	29	122	Meningitis, Viral	13	8	14	6	41
Carbon monoxide intx.	0	0	0	1	1	Meningitis, Bact.	3	5	4	3	15
Chancroid	0	0	0	0	0	Mercury intoxication	0	0	0	0	0
Chemical agent exp.	1	0	8	0	9	Mumps (adults only)	1	1	1	0	3
Chlamydia	911	984	784	684	3363	Mycobacterial inf.	0	0	0	0	0
Cholera	0	0	0	0	0	Pertussis	1	0	3	4	8
Coccidioidomycosis	0	0	0	0	0	Plague	0	0	0	0	0
CWI, unspecified	21	0	0	3	24	Pneumococcal pneum.	0	0	0	0	0
CWI, frostbite	126	0	0	20	146	Poliomyelitis	0	0	0	0	0
CWI, hypothermia	0	0	0	0	0	Psittacosis	0	0	0	0	0
CWI, immersion type	15	1	0	1	17	Q fever	0	0	0	0	0
Dengue fever	0	0	0	1	1	Rabies, human	0	0	0	0	0
Diphtheria	0	0	0	0	0	Radiation injury	0	0	0	0	0
Ehrlichiosis	0	1	0	0	1	Relapsing fever	0	0	0	0	0
Encephalitis	0	1	1	0	2	Reye syndrome	0	0	0	0	0
Giardiasis	15	19	35	19	88	Rhabdomyolysis	18	11	6	2	37
Gonorrhea	294	301	334	263	1192	Rheumatic fever	0	1	0	0	1
Granuloma Inguinale	0	1	0	0	1	Rift Valley Fever	0	0	0	0	0
Guillain-Barre Syndrome	1	1	1	0	3	RMSF	2	1	2	0	5
H. influenzae, inv.	0	0	0	2	2	Rubella	1	0	0	0	1
Heat exhaustion	3	24	45	11	83	Salmonellosis	24	41	76	39	180
Heat stroke	2	17	7	2	28	Schistosomiasis	0	0	1	0	1
Hemorrhagic fever	0	1	0	1	2	Shigellosis	7	18	54	32	111
Hepatitis A, Acute	11	6	2	17	36	Syphilis, unspec.	9	18	7	3	37
Hepatitis B, Acute	15	18	11	13	57	Syphilis, prim/sec	7	6	3	8	24
Hepatitis C, Acute	9	5	4	8	26	Syphilis, latent	6	5	5	8	24
Hepatitis, unspec.	1	2	2	4	9	Syphilis, tertiary	1	5	2	0	8
Herpes Simplex	186	171	143	102	602	Syphilis, congenital	0	0	0	1	1
Influenza	17	1	13	11	42	Tetanus	0	0	0	1	1
Kawasaki syndrome	1	5	0	0	6	Toxic shock syndrome	0	0	0	1	1
Lead poisoning	1	4	1	2	8	Toxoplasmosis	0	1	0	0	1
Legionellosis	0	0	2	3	5	Trichinellosis	0	0	0	0	0
Leish, unspecified	1	3	0	0	4	Trypanosomiasis, Afr.	0	0	0	0	0
Leish, cutaneous	6	10	5	0	21	Trypanosomiasis, Amer.	0	0	0	0	0
Leish, mucocutaneous	0	1	0	0	1	Tuberculosis, pulmonary	11	8	4	1	24
Leish, visceral	0	0	0	0	0	Tularemia	0	0	0	0	0
Leish, viscerotropic	0	0	0	0	0	Typhoid fever	0	0	0	0	0
Leprosy	0	0	0	0	0	Typhus fever	0	0	0	0	0
Leptospirosis	0	0	1	0	1	Urethritis, non-specific	200	255	196	201	852
Listeriosis	0	0	1	1	2	Vaccine advrs event	23	2	0	1	26
Lyme disease	1	7	9	1	18	Varicella, adult only	45	27	9	17	98
Lymphogranuloma Vnrm	1	3	3	5	12	Yellow fever	0	0	0	0	0
<b>Total</b>						<b>2039</b>	<b>2044</b>	<b>1851</b>	<b>1539</b>	<b>7473</b>	

\* Based on date of onset.

TABLE S7. Active Duty Force Strength by MTF, United States Army, Dec 1996\*

MTF/Post**	Males							Females							All
	< 20	20-24	25-29	30-34	35-39	>= 40	Total M	< 20	20-24	25-29	30-34	35-39	>= 40	Total F	
NORTH ATLANTIC RMC															
Walter Reed AMC	158	1302	1432	1694	1965	3290	9841	24	420	538	518	496	567	2563	12404
Aberdeen Prov. Ground	462	485	359	414	427	341	2488	102	104	93	64	49	36	448	2936
FT Belvoir, VA	41	325	388	321	322	368	1765	17	110	120	96	83	59	485	2250
FT Bragg, NC	1914	12391	9466	6757	4333	2432	37293	228	1600	1304	719	474	234	4559	41852
FT Drum, NY	439	3574	2285	1387	946	482	9113	61	405	229	132	86	37	950	10063
FT Eustis, VA	512	1354	1101	992	876	888	5723	175	418	305	183	132	93	1306	7029
FT Knox, KY	1543	2654	1559	1381	1224	744	9105	35	190	181	123	105	79	713	9818
FT Lee, VA	829	914	678	610	486	392	3909	534	363	230	169	123	70	1489	5398
FT Meade, MD	82	754	1128	1019	863	1040	4886	38	291	296	249	213	169	1256	6142
USMA, West Point, NY	36	279	277	729	610	597	2528	5	63	64	118	93	70	413	2941
CENTRAL RMC															
Fitzsimons AMC	14	74	99	70	75	95	427	8	28	28	15	21	14	114	541
GREAT PLAINS RMC															
Brooke AMC	270	792	965	1010	835	984	4856	293	473	434	388	313	319	2220	7076
FT Carson, CO	533	3974	3345	2292	1587	821	12552	96	560	401	234	153	83	1527	14079
FT Hood, TX	2226	12914	9291	5851	4045	2360	36687	342	2240	1567	870	584	300	5903	42590
FT Leavenworth, KS	32	297	229	565	833	595	2551	18	76	62	82	101	51	390	2941
FT Leonard Wood, MO	1436	1922	1003	1047	834	498	6740	442	470	247	153	93	71	1476	8216
FT Polk, LA	369	2182	1521	1168	740	403	6383	80	355	230	130	84	58	937	7320
FT Riley, KS	807	3311	2071	1385	913	452	8939	113	412	233	155	96	60	1069	10008
FT Sill, OK	1972	4000	2529	1786	1400	785	12472	87	369	289	180	107	73	1105	13577
Panama	80	667	732	648	568	469	3164	12	132	117	86	71	31	449	3613
SOUTHEAST RMC															
Eisenhower AMC	1451	1875	1371	1193	1408	1206	8504	372	557	439	383	319	230	2300	10804
FT Benning, GA	2331	4362	3008	2043	1381	723	13848	108	431	363	222	135	70	1329	15177
FT Campbell, KY	1149	6667	5816	3634	2291	1095	20652	170	1027	688	399	224	98	2606	23258
FT Jackson, SC	1503	1812	802	863	643	418	6041	969	942	461	325	165	90	2952	8993
FT McClellan, AL	539	708	473	616	529	399	3264	197	247	146	119	97	52	858	4122
FT Rucker, AL	96	626	928	635	520	466	3271	60	131	134	76	59	37	497	3768
FT Stewart, GA	975	6086	4515	2752	1889	1035	17252	166	962	687	342	227	92	2476	19728
SOUTHWEST RMC															
Wm Beaumont AMC	611	2160	1658	1201	1209	1091	7930	134	594	367	213	144	161	1613	9543
FT Huachuca, AZ	297	1007	1036	807	670	508	4325	138	350	208	171	145	87	1099	5424
FT Irwin, CA	169	1248	889	769	512	305	3892	27	170	115	86	46	20	464	4356
NORTHWEST RMC															
Madigan AMC	758	5142	4103	2841	1983	1330	16157	115	847	668	372	271	181	2454	18611
FT Wainwright, AK	230	1922	1659	1004	631	316	5762	44	290	224	152	98	49	857	6619
PACIFIC RMC															
Tripler AMC	648	4006	3477	2260	1513	1003	12907	90	699	657	402	307	202	2357	15264
OTHER LOCATIONS															
Europe	1392	11028	10530	7631	5766	3665	40012	254	2197	1872	1225	907	534	6989	47001
Korea	1858	8191	5951	4451	3502	2089	26042	444	1494	1108	701	479	268	4494	30536
Unknown	1352	9328	8806	9019	6578	4259	39352 <sup>§</sup>	499	1712	1342	1141	789	408	5894 <sup>§</sup>	45875 <sup>§</sup>
Total	29114	120333	95480	72845	54907	37944	410633	6497	21729	16447	10993	7889	5053	68611	479873

\* Based on duty zip code. Does not account for TDY.

§ Includes unknown age groups and unknown gender.

\*\* Includes any subordinate catchment areas not listed separately.

Source: Defense Manpower Data Center (DMDC)



DEPARTMENT OF THE ARMY  
U.S. Army Center for Health Promotion  
and Preventive Medicine  
Aberdeen Proving Ground, MD 21010-5422

OFFICIAL BUSINESS  
MCHB-DC-EDM

BULK RATE  
U.S. POSTAGE  
PAID  
APG, MD  
PERMIT NO. 1